

Appl. No. : 10/657,022  
Filed : September 5, 2003

## AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** An polypeptide isolated epitope, comprising a component selected from the group consisting of:

- (i) a polypeptide epitope having the sequence as disclosed in TABLE 1B;
- (ii) an epitope cluster comprising the polypeptide of (i);
- (iii) a polypeptide having substantial similarity to (i) or (ii);
- (iv) a polypeptide having functional similarity to any of (i) through (iii); and
- (v) a nucleic acid encoding the polypeptide of any of (i) through (iv).

2. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is immunologically active.

3. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is less than about 30 amino acids in length.

4. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is 8 to 10 amino acids in length.

5. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the substantial or functional similarity comprises addition of at least one amino acid.

6. **(Currently Amended)** The polypeptide epitope of claim 5, wherein the at least one additional amino acid is at an N-terminus of the polypeptide.

7. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the substantial or functional similarity comprises a substitution of at least one amino acid.

8. **(Currently Amended)** The polypeptide epitope of claim 1, the polypeptide having affinity to an HLA-A2 molecule.

9. **(Currently Amended)** The polypeptide epitope of claim 8, wherein the affinity is determined by an assay of binding.

10. **(Currently Amended)** The polypeptide epitope of claim 8, wherein the affinity is determined by an assay of restriction of epitope recognition.

11. **(Currently Amended)** The polypeptide epitope of claim 8, wherein the affinity is determined by a prediction algorithm.

12. **(Currently Amended)** The polypeptide epitope of claim 1, the polypeptide having affinity to an HLA-B7 or HLA-B51 molecule.

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13. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is a housekeeping epitope.

14. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide corresponds to an epitope displayed on a tumor cell.

15. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide corresponds to an epitope displayed on a neovasculature cell.

16. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is an immune epitope.

17. **(Currently Amended)** The polypeptide epitope of claim 1, wherein the polypeptide is encoded by a nucleic acid.

18. **(Currently Amended)** A composition comprising the polypeptide epitope of claim 1 and a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.

19. **(Previously Presented)** The composition of claim 18, where the adjuvant is a polynucleotide.

20. **(Previously Presented)** The composition of claim 19 wherein the polynucleotide comprises a CpG dinucleotide. \*

21. **(Previously Presented)** The composition of claim 18, wherein the adjuvant is encoded by a polynucleotide.

22. **(Previously Presented)** The composition of claim 18 wherein the adjuvant is a cytokine.

23. **(Previously Presented)** The composition of claim 23 wherein the cytokine is GM-CSF.

24. **(Previously Presented)** The composition of claim 18 further comprising a professional antigen-presenting cell (pAPC).

25. **(Previously Presented)** The composition of claim 18, further comprising a second epitope.

26. **(Previously Presented)** The composition of claim 25, wherein the second epitope is a polypeptide.

27. **(Previously Presented)** The composition of claim 25, wherein the second epitope is a nucleic acid.

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28. **(Previously Presented)** The composition of claim 25, wherein the second epitope is a housekeeping epitope.

29. **(Previously Presented)** The composition of claim 25, wherein the second epitope is an immune epitope.

30. **(Previously Presented)** A recombinant construct comprising the nucleic acid of Claim 1.

31. **(Previously Presented)** The construct of claim 30, further comprising a plasmid, a viral vector, a bacterial vector, or an artificial chromosome.

32. **(Previously Presented)** The construct of claim 30, further comprising a sequence encoding at least one feature selected from the group consisting of a second epitope, an IRES, an ISS, an NIS, and ubiquitin.

33. **(Previously Presented)** A composition comprising at least one component selected from the group consisting of the epitope of claim 1; a composition comprising the polypeptide or nucleic acid of Claim 1; a composition comprising an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a recombinant construct comprising the nucleic acid of Claim 1; an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a host cell expressing a recombinant construct comprising a nucleic acid encoding a T cell receptor binding domain specific for an MHC-peptide complex and a composition comprising the same, and a host cell expressing a recombinant construct comprising the nucleic acid of claim 1 and a composition comprising the same; with a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.

34. **(Previously Presented)** A method of treating an animal, comprising:  
administering to an animal the composition of claim 33.

35. **(Previously Presented)** The method of claim 34, wherein the administering step comprises a mode of delivery selected from the group consisting of transdermal, intranodal, perinodal, oral, intravenous, intradermal, intramuscular, intraperitoneal, mucosal, aerosol inhalation, and instillation.

36. **(Previously Presented)** The method of claim 34, further comprising a step of assaying to determine a characteristic indicative of a state of a target cell or target cells.

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37. **(Previously Presented)** The method of claim 36, comprising a first assaying step and a second assaying step, wherein the first assaying step precedes the administering step, and wherein the second assaying step follows the administering step.

38. **(Previously Presented)** The method of claim 37, further comprising a step of comparing the characteristic determined in the first assaying step with the characteristic determined in the second assaying step to obtain a result.

39. **(Previously Presented)** The method of claim 38, wherein the result is selected from the group consisting of: evidence of an immune response, a diminution in number of target cells, a loss of mass or size of a tumor comprising target cells, a decrease in number or concentration of an intracellular parasite infecting target cells.

40. **(Currently Amended)** A method of making a vaccine, comprising:

combining at least one component selected from the group consisting of the polypeptide epitope of claim 1; a composition comprising the polypeptide or nucleic acid of Claim 1; a composition comprising an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; a composition comprising a host cell expressing a recombinant construct, the construct comprising the nucleic acid of claim 1, or the construct encoding a protein molecule comprising the binding domain of a T cell receptor specific for an MHC-peptide complex; a recombinant construct comprising the nucleic acid of Claim 1; an isolated T cell expressing a T cell receptor specific for an MHC-peptide complex, the complex comprising the polypeptide of claim 1; and a host cell expressing a recombinant construct, the construct comprising the nucleic acid of claim 1, or the construct encoding a protein molecule comprising the binding domain of a T cell receptor specific for an MHC-peptide complex; with a pharmaceutically acceptable adjuvant, carrier, diluent, or excipient.